BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on policies and practices for advanced metering, demand response, and dynamic pricing	R.02-06-001.

CALIFORNIA CONSUMER POWER AND CONSERVATION FINANCING AUTHORITY

Description of Existing and Planned Demand-Response Activities

Pursuant to the Order Instituting Rulemaking, dated June 10, 2002, page 4, the Consumer Power and Conservation Financing Authority (the California Power Authority, Power Authority, or CPA) submits the attached description of our existing and planned demand-response activities

* * *

Dated August 9, 2002, at Sacramento, California.

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California Power Authority

Demand Management Programs to Address Strategic Power Reserve Requirements

In February, 2002, the CPA submitted an Energy Resource Investment Plan to the Legislature identifying how it planned to meet its mission of insuring adequate reserves. In preparing its plan, the CPA received public comment, especially from the business community, hat the Demand Responsiveness was the most important way for the CPA to maintain adequate reserves. As a result over half of the CPA's 3500 MW by 2006 targeted in the Investment Plan were designated to come from Demand Responsiveness.

CPA has developed two major programs as steps toward this goal – the Demand Reserves Partnership and financing of real-time meter and communication infrastructure. Each of these is described briefly below, and in more detail in the Attachments.

Demand Reserves Partnership

CPA developed the Demand Reserves Partnership to provide the opportunity for Demand Responsiveness to achieve direct savings in the wholesale market. The Partnership was developed primarily to use demand reduction as a type of Reserve or Ancillary Service in the wholesale market. The CalSO provides for that but little demand has participated in that market.

The backbone of the Partnership is a five-year agreement in which DWR buys up to 1000 MW of Demand Reserves from the CPA for use as Ancillary Services or as a Call Option to reduce demand during wholesale market price spikes. Attachment 1 presents information to further explain the operation of the Partnership:

- Fact Sheet
- Contract Relationship Diagram
- Frequently Asked Questions
- Case Study

Financing of "Real Time Meters"

In October 2001, the CPA issued a request for proposals (RFP) for financing the supply and installation of real time meters for California power customers. Target customers were those that did not already have such meters, i.e. those customers whose power demands were less than 200 kW. The RFP stated:

> These customers do not have meters that give them timely information on their power consumption in total or during hours of peak demand. Such information encourages and facilitates conservation and load management. With such meters, customers can switch to a time-of-day tariff and achieve savings by reducing their usage during peak hours by shifting to off peak and conserving.

Attachment 2 is a March 2002 staff memorandum to the Power Authority's Board, indicating the 11 proposals received, and summarizing the four proposals selected for possible financing.

Attachment 3 (TrueEnergy's CalMeter program) is a summary of the first of the selected proposals ready for financing arranged by the Power Authority.

ATTACHMENT 1

STATE OF CALIFORNIA

CONSUMER POWER AND CONSERVATION FINANCING AUTHORITY

California Demand Reserves Partnership Fact Sheet

What Is the California Demand Reserves Partnership Program?

- The program encourages businesses to agree to reduce power usage when supplies are low due to weather extremes, power plant outages, or transmission system bottlenecks.
- For the very first time, advanced metering and Internet communications technologies allow businesses to provide power to California just as power plants do – and without any pollutants.
- Between 500 and 1,000 megawatts of power are made available – enough to keep the lights on in up to 500,000 California homes, while displacing the need to build 20 new peak power plants.
- Businesses are compensated for choosing to reduce their power usage when it is most needed.

Who Administers & Operates the Program?

- The California Power Authority (CPA) administers the program in cooperation with the California Department of Water Resources (DWR) and the California Independent System Operator (CAISO).
- APX Inc., based in Santa Clara, Calif., operates the program under a contract with the CPA.
- The following Demand Reserves Providers, under contract to the CPA, manage program participation by businesses and other organizations: Ancillary Services Coalition; Celerity; DBS Industries; Infotility; Legacy Energy; Planergy; and Robertson Bryan. (see website for more detail)
- California's Flex Your Power Campaign assists the CPA in promoting the program to businesses.

Who Can Participate?

- California businesses, such as manufacturing plants, commercial firms, agricultural firms, stores and other retailers, and property management firms.
- Government facilities, water agencies, and universities.
- Other large full-service customers of the state's major utilities – Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric.

When will the Program Begin?

- This five-year program began operation July 1, 2002. Providers are still signing up participants.

How Does It Work?

- A business signs up to participate through a Demand Reserves Provider. The business determines the maximum amount of kilowatt reduction it can provide during high usage hours.
- The business is paid a monthly reservation fee in return for making the capacity available.
- When the state needs additional energy via reduced usage, participating businesses are notified up to 24 hours in advance.
- The APX-operated Internet-based computer system records and monitors the reduction as it occurs and calculates the additional amount each business will be compensated for its actual reductions.
- The business receives compensation from the Demand Reserves Provider it has selected.

What Are the Benefits?

- This partnership program provides an immediate and flexible insurance policy for power grid emergencies.
- The program can help reduce price spikes caused by supply shortages.
- The electric power made available by demand response is the cleanest of all – power not used.
- The program saves up to 50 percent of the cost of building and operating peaker power plants.
- Businesses offset their energy costs, contributing to the state's economic health and helping to keep jobs in California.
- Businesses use about half of the peak electricity load during weekday afternoon hours. Available supplies are immediately increased when businesses reduce usage or shift non-essential operations to non-peak usage times.
- This new government and business partnership program helps to maintain a clean, reliable, and cost-effective electricity supply in California through business demand response.

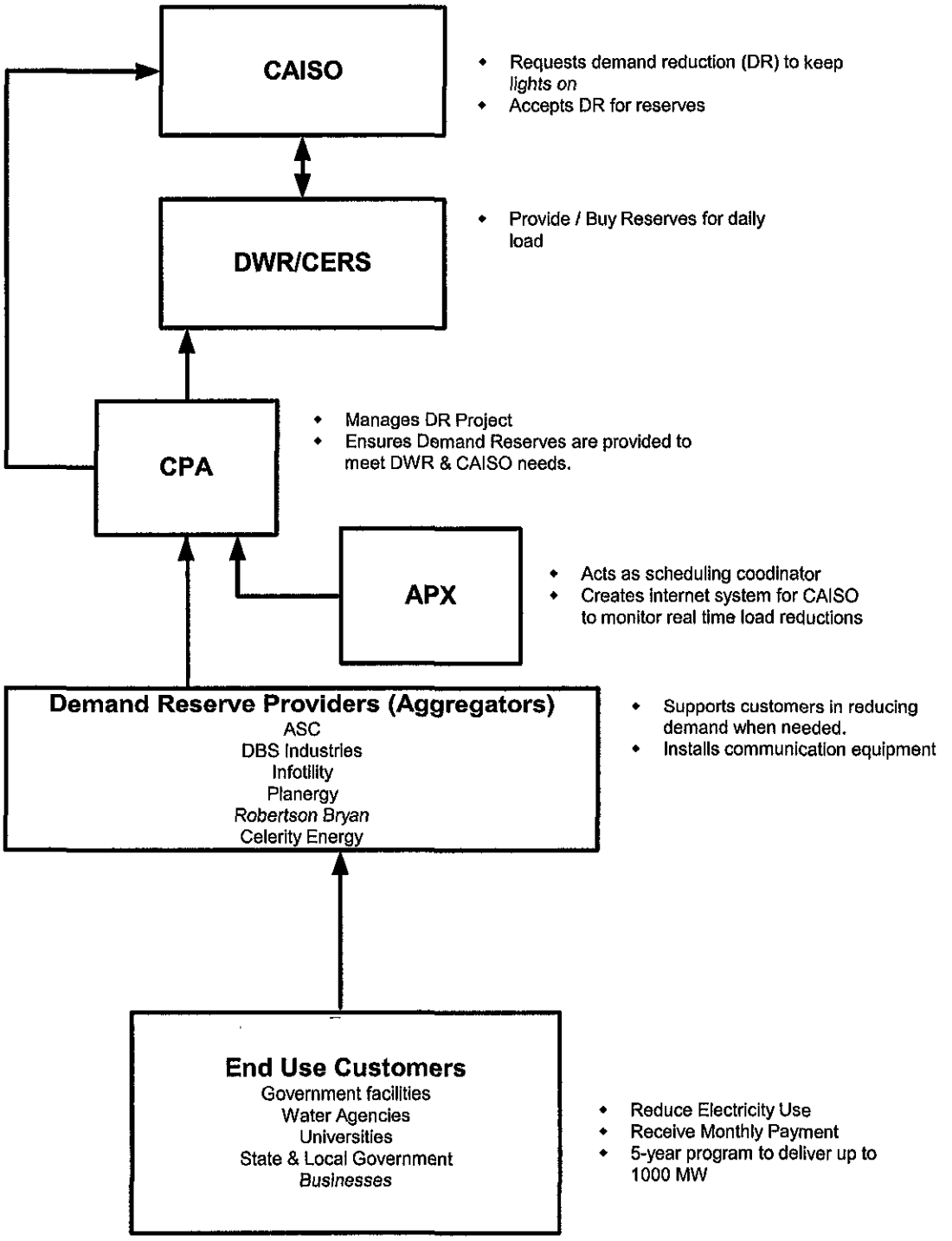
For More Information:

News Media Contact: Linda Chou, CPA, 916/651-9750, linda.chou@dgs.ca.gov

Go To: www.capowerauthority.ca.gov/ or www.caldrp.com

Flex your POWER

California Power Authority
Demand Reserves Partnership Program



California Demand Reserves Partnership FAQs

Program Sign-up & Eligibility

How can my company or organization join the program?
You contract with a Demand Reserves Provider. Several independent companies have been contracted by the California Power Authority (CPA) to act as Demand Reserves Providers that provide demand reduction through the businesses that have signed up through them when requested by the CAISO or the DWR. By contacting more than one Demand Reserves Provider, you can determine which provider best fits your service and financial requirements. Your Demand Reserves Provider will pay your organization based on the amount of demand reduction you provide and the terms of your contract.

What is the role of the Demand Reserves Providers (Aggregators)?
Aggregators, or Demand Reserves Providers, are independent companies who are under contract with the CPA to deliver demand reduction through participating businesses. Their roles include:

- Recruiting businesses and organizations to participate in this program;
- Helping participants develop a strategy for reducing demand when requested;
- Informing participants when the CAISO or DWR needs demand reduction;
- Ensuring the participant has the proper metering and communication equipment so that the CAISO or DWR know how much demand has been reduced;
- Distributing payments to participants for reducing demand from the funds provided by the CPA.

The program operator APX is under contract with the CPA to provide administration, day-to-day operational support, system development, and data infrastructure services for the program.

You may be contacted by mail, telephone, or e-mail by any or all of the Demand Reserves Providers so that your organization can choose the provider it wants to use.

Can you help us figure out what amount of power we can make available to the program?
A Demand Reserves Provider can help you determine how much curtailable capacity you can make available. With extensive backgrounds in energy and demand management, the program's Demand Reserves Providers understand electricity usage profiles, facility operations, etc., and can work with you to help identify a demand reduction strategy that makes sense based on business needs.

Can we participate even though we've already made significant efficiency upgrades to our facilities?
Yes. Energy efficiency and demand reduction work hand-in-hand in helping an organization control its overall energy costs. Organizations that have installed special control equipment as part of their energy efficiency upgrades may find this program especially easy to participate in. For example, if you have installed lighting with dimmable ballasts or variable frequency drives on motors, you can easily reduce demand with little or no impact on your operational needs. However, each organization must determine the reduction strategies that best fit its business requirements. Your Demand Reserves Provider can help identify and evaluate the best-fit opportunities for your organization.

Our organization collectively uses 200 kW at peak, but that consumption is spread out over multiple accounts. Are we eligible for this program?
Yes. You can aggregate your peak demand reduction options over several accounts. You are not required to reduce your targeted amount through just one meter.

Who are we contracting with? Is it the state or a private company?
Participants have two choices of contracting relationship. First, your organization can act as its own Demand Reserves Provider and contract directly with the CPA if you have at least 5,000 kW of demand that can be reduced and you are agreeable to manage non-performance risk. Second, your organization can work through an independent Demand Reserves Provider that will assist you in complying with program rules, installing the correct meter and communication systems, and developing a demand reduction strategy that best fits your company's operational needs.

If another Demand Reserves Provider offers us a better deal after we've already signed up, can we switch?
Any "out clause" must be agreed to and included in your contract with a Demand Reserves Provider. It is advisable to consult with an attorney before signing any contract.

If we don't want to participate now, can we sign up later?
Yes, the program has an open enrollment policy. Participants may sign up at any time during the duration of the program.

Participation Details

How much demand are you asking our company or city or water agency to make available?
The amount of demand reduction (kilowatts per hour or kW/hr) depends on each organization's ability to reduce its usage or demand while balancing its production and operational requirements. You determine the amount of demand you can reduce. Obviously, the larger your organization, the more demand you can reduce.

Smaller organizations also can participate. Retail and small commercial companies with multiple sites can aggregate their demand reductions to achieve a significant amount of reduction. However, if your maximum demand is under 100 kW or your annual bill is under $50,000, your company will find it difficult to justify participating in this program, unless you have installed special metering and control equipment for other purposes.

Does this program only apply to peak demand?
No, the program operating hours are 11:00 a.m. to 7:00 p.m., Monday through Friday, which is the usual peak demand time. While most reductions are anticipated to occur during peak demand periods, that may not always be the case, especially during winter months.

How often will we be asked to draw down my demand?
The frequency of reductions will depend on weather and other factors. Participating organizations make a commitment to reduce their demand up to a maximum of 24 hours per month, or a total of 150 hours per year. Once a participant has met its monthly obligation of 24

hours, it is not obligated to reduce demand for any hours remaining in that month. Participants have the flexibility to determine in ahead of time when and how much demand they can reduce each day. With some advance notice, a participant can elect to change its nominations on a daily basis or hourly basis, depending on its operational needs each day.

Who will decide that our company needs to reduce its power use?
Either the California Independent System Operator (CAISO) or the California Department of Water Resources (DWR) will make the decision to reduce demand. The CAISO, which operates the state's system of high-voltage transmission lines, will request demand reduction if and when power supplies need to be supplemented to keep the lights on. The DWR, which is buying power for California consumers until the utilities are once again creditworthy, will request demand reduction if and when it needs to lessen the amount of power to be purchased when wholesale electricity prices are very high.

Who will physically draw down my organization's power (i.e., who turns the dial or flips the switch)?
This depends on the contract your organization has with your Demand Reserves Provider. The reduction either will be made by your internal facilities staff, control equipment at your facility that automatically responds to the reduction message, or by your Demand Reserves Provider.

How much notice will we have before you draw down our power?
A participant typically will be notified no less than 90 minutes in advance of a demand reduction in July and August 2002 – the early months of the program. When possible, notification will be given much earlier – usually by 3:00 p.m. on the day before the needed reduction.

Beginning in September 2002, a participant can choose either a 10-minute or a 60-minute reserve. Participants who can reduce demand within 10 minutes of notification will be paid more than those who need 60 minutes of notice to reduce demand. Again, whenever possible, a participant will be notified the afternoon before.

Will we have control over what gets shut down at our facility?
Each participant determines a demand reduction strategy that best suits its facility and operational needs. Once a participant has determined its normal demand reduction capability, it can decide each day if it wants to increase or decrease the amount of demand reduction it is willing to provide each hour from 11 a.m. to 7 p.m. of the next business day. However, once a participant has committed an amount of demand reduction to CPA and a reduction is called for, it must be ready to reduce this amount or it may be subject to program penalties.

If we have an energy-intensive process that must be done on a reduction day, must we comply with the reduction order?
To ensure efficient and predictable operation of this program, participants must comply with any reduction order in the amount they have committed to. If your facility has energy-intensive operations on certain days, it is best to factor that into your commitment so that it reflects what you can reasonably provide under any circumstances.

Will we have any choice over when our power can be reduced?
These choices need to be made prior to an actual demand reduction notification. In signing up for the program you are committing your company to be "on call" for reducing demand when

needed between the hours of 11 a.m. and 7 p.m. The best strategy is to only commit the amount for each hour for which you are confident you can reduce your demand.

What will it cost us to participate?
Participation start-up costs depend on what type of meters are already installed at your facility. For the first phase of the program from July 1 to Sept. 30, 2002, organizations only need to have an interval meter to participate. An interval meter records electricity usage in 15-minute intervals, unlike a traditional meter that records only cumulative, monthly usage. Most end-use customers whose facility's peak demand exceeds 200 kW demand (equating to an annual bill of more than $100,000) have already received, or soon will receive, an interval meter through the California Energy Commission. Therefore, for most customers the program start-up cost may be zero.

The second phase of the program, which starts Oct. 1, 2002, will require participants to have special meter and communication systems to qualify to sell their curtailment into the CAISO Ancillary Services market. The one-time cost for telecommunications gateways will range from $700 to $2,500 per meter installed, depending on the type of equipment and supplier. There may be additional monthly costs for a dedicated communication link to the host computer via phone, ISDN, DSL, or wireless connection to the meter, plus monthly Internet ISP service.

Larger organizations can recover the required participation costs in a very short period. While cost recovery will take longer for organizations that reduce smaller amounts of demand, they too will realize a positive return on investment from program incentives over a five-year period.

Is funding available to help us cover equipment costs?
Yes. The California Energy Commission (CEC) has several sources of grant money available, until it is all committed. See the CEC's Peak Load Reduction Program at: http://www.energy.ca.gov/peakload/index.html.

How much will you pay us for energy reductions?
A Demand Reserves Provider will explain the value of the program for your organization and how much you will be paid. Typically, you will receive two types of payments from your Demand Reserves Provider. One type of payment will be a retainer – you will receive a routine payment for the committed capability to reduce demand, whether or not you actually are asked to reduce usage. The more you are willing to reduce, the higher your retainer payment. The second type will be a performance payment that is tied to the actual amount of demand you reduce.

The actual payment a participant will receive may vary by Demand Reserves Provider depending on the package of services provided.

Where does the money come from to pay for our demand reduction and is the budget secure?
This program is funded through the DWR. The budget is secured through a contract between DWR and the CPA, which in turn has a contract with your Demand Reserves Provider. DWR funding is guaranteed by legislative action.

How can we be sure that we will receive an accurate reimbursement for the actual amount of energy reduced?

Program operator APX will review the electricity usage recorded by your meter. APX will calculate your demand reduction based on a methodology approved by the CPA and DWR. The CPA and DWR will use this calculation to determine how much is paid to your Demand Reserves Provider. In turn, your Demand Reserves Provider will pay you based on your contract terms with the provider. In the event of a question, you can ask your provider for the data APX used to calculate your demand reduction.

Are there financial penalties if we cannot provide the power when it is needed?
Because this is a market-based program, your organization may be subject to penalties in the event that you are unable to comply with your committed reduction amount. You can manage your company's exposure to program penalties by carefully developing your demand reduction strategy and by working closely with your Demand Reserves Provider, who can adjust your reduction commitment for those times when you know that you won't be able to meet your obligation.

Will our business competitors have access to our energy use information?
All meter data is confidential and will only be shared with your Demand Reserves Provider. APX will access your meter data for account settlements, but is obligated under its contract with the CPA to ensure that your meter data remains confidential and is never shared with a business competitor. This applies to your demand profile as well.

How long is our commitment?
While this is a five-year program, that does not mean that you must commit to the full five years. You may ask your Demand Reserves Provider to provide contract terms that allow you to sign up for a shorter term, with an option to renew. As with any contract, it is important seek legal advice to fully understand the terms and conditions you are committing to prior to signing the contract.

For More Information:

Go To: www.capowerauthority.ca.gov/ or www.caldrp.com (to be available by July 1, 2002).

Large Commercial Facility
Illustrative Participation
in the
California Power Authority's
Demand Reserves Partnership

Facility
The building has 300,000 square feet with a 1000 kW peak demand and $750,000 annual power bill. This could be a small high-rise office, a mini-mall with 2-3 anchor stores or a modest size high technology manufacturer.

Steps
The Facility Manager has been told by senior management to participate in this program to help maintain reliable power in California and to protect against high wholesale market prices as long as there are no major negative impacts or uncovered costs. To participate in the CPA Partnership, the Facility Manager follows these steps:

1. *Contacts Demand Reserves Providers* from the list of eligible providers,
2. *Confirms this facility qualifies* to participate with the help of a Demand Reserves Provider,
3. *Identifies a Demand Reserves Control Strategy* -- what modifications in the facility management operations make sense for this facility -- and the associated cost savings,
4. *Contracts* with a Demand Reserves Provider to participate,
5. *Installs* any necessary metering, communications and control equipment,
6. *Verifies* the facility's demand reduction capacity (capability),
7. *Executes* the Control Strategy when called upon due to low power reserves or very high wholesale power market prices,
8. *Receives payment* from the Demand Reserves Provider.

Each of these steps is discussed below.

1. Contacts eligible Demand Reserves Providers
The Facility Manager goes to the www.caldrp.com web-site to identify one or more Demand Reserve Providers it wants to work with in evaluating its potential participation in the CPA Partnership.

2. Confirms that this facility qualifies for the Partnership
The Demand Reserves Provider helps the Facility Manager confirm that this facility qualifies for the Partnership by:

a. being a Full Service electric customer of PG&E, SCE or SDG&E,[1]
b. having an annual electric bill over $100,000,
c. not being on an interruptible rate or Demand Bidding program.

3. Identifies an appropriate Control Strategy
The Facility Manager works with the Demand Reserve Provider to identify a Control Strategy that fits both the needs of the CPA Partnership and the facility.
The CPA Partnership requests facilities to be able to reduce demand:

- During the hours of 11 am to 7pm, Monday through Friday
- On a 24 hour advance notice this summer with additional savings provided for those who can reduce demand on a 10 minute notice,
- At least 2 hours, with the customer's option to go up to 8 hours, and
- A maximum of 24 hours in a month or 150 hours in a year.

[1] CPA is working so customers of other Load Serving Entities can participate.

The Facility Manager can vary the amount (number of kilowatts) of demand reduction by month, day, and hour.

With the support of a Demand Reserve Provider, the Facility Manager decides to use the facility energy management system to automatically reduce demand on a 10-minute notice for up to two hours maximum. The actions the system takes are to:

- adjust the air conditioning set points to reduce chiller and air handling load -- this is especially attractive in facilities having thermal storage systems,
- reduce lighting levels in less critical areas – this is possible with lighting controls, especially dimmable ballasts,
- re-schedule electricity intensive equipment (e.g., pumps,)
- start a natural gas fired back-up gas generator (conventional diesel units cannot be used unless converted to dual fuel or using special control technologies approved by the Air Resource Board)

For these combined actions, the Facility Manager expects to be able to reduce demand by 300 kW for a two-hour duration on 10-minute notice. The Facility Manager believes such actions will have no major impact on the occupants' activities.

The Facility Manager also reviews the savings and costs from the Partnership:

Illustrative *Annual* Direct Savings:

Wholesale (payments from Demand Reserve Provider):		
300 kW @ $35/kW-yr[1]	= $10,500	
300 kW for 150 hrs @ $.07/kWh	= $ 3,150	(beginning 1-1-03)
Retail (savings on utility bill)		
300 kW for 150 hrs @ $.16/kWh	= $ 7,200	
Total *Annual* Savings	= $20,750	(2.7% of annual bill)
Expected 5 year Savings	= $102,350	

Illustrative *One-Time* Direct Costs[2]:

Pulse Initiating Output from Utility Meter	= $ 1,000
Gateway to send meter data to CPA	= $ 2,000
Control systems modifications	none
Total One-Time Direct Costs	= $ 3,000

[1]The reservation payment will be about 30% less if the facility takes longer than 10 minutes to respond.
[2]By using the Facility's internet access to send meter data to CPA, no on-going communication costs are incurred. Some facility managers may prefer to use a separate internet connection for transmitting meter data, which may cost $5-60 per month. This example facility needed no modifications to its control systems. Other facilities may need some modifications.

The direct savings clearly exceed the costs. In addition, from past experience in installing other special metering and controls, the Property Manager has found that the indirect benefits of monitoring building performance and exercising more precise equipment control often lead to additional indirect savings (e.g., faster detection of equipment malfunction) equal to the direct savings.

With the option to contract up to 5 years, the Facility Manager plans to convert another 50 kW diesel back-up generator to natural gas. In addition, the Facility Manager plans to add another 100 kW ice storage module to move more toward a full storage cooling capability. The certainty of benefit of this program makes these investments attractive -- and allows the Facility Manager to obtain even greater cost savings.

As discussed in the Appendix, the Facility Manager finds the Partnership attractive compared to other utility load management rate options. Thus, the Facility Manager is ready to move ahead.

4. Contracts with a Demand Reserves Provider
The Facility Manager agrees to sign a contract with the Demand Reserves Provider and move ahead with the Partnership.

5. Installs necessary equipment
The Facility Manager asks the Demand Reserves Provider to manage the installation of the pulse initiating meter output from the utility and the installation of the data communication gateway. The Facility Manager coordinates with the Demand Reserve Provider and the energy management system provider for an automatic interface. Initially, the Facility Manager has the energy management system programmed so that only the push of a few buttons is necessary to implement the Partnership Control Strategy when the notification signal is received. *During the summer of 2002, a Facility Manager can begin participating in the program before all the additional equipment is installed if they at least have a utility interval meter.*

6. Verifies Demand Reduction Capacity (Capability)
To provide the CPA with confidence of the facility's ability to reduce demand, the Demand Reserve Provider will help the Facility Manager certify the demand reduction capacity (capability) through either past load reduction results or through a test at this time.

7. Executes Control Strategy
At this point, the Facility Manager is ready to begin participating in the program. The Demand Reserve Provider will help the Facility Manager determine what the Demand Reduction capacity is each month/day/hour and to inform CPA of such capacity. When demand reduction is necessary, the Demand Reserve Provider will notify the Facility Manager (and others in the facility) in one of several ways – pager, cell phone, fax, e-mail, e-mail to a computer to automatically start control. The Facility Manager will then begin receiving payments for being available to reduce demand -- to protect against low power reserves and high wholesale market prices.

8. Receives Payment from the Demand Reserves Provider
Based on the terms of the contract, the Demand Reserves Provider will pay the Facility Manager for providing demand reduction capacity[2]. Payments will be lower for hours in which the facility provides less capacity.

[2] CPA has the right to terminate its contract with any Demand Reserve Provider who does not abide by its payment terms with facilities.

Appendix
Comparison of the Partnership to other leading Demand Reduction options

The Facility Manager also found this Partnership attractive compared to other leading options available.

There are several features that make the Partnership attractive compared to **interruptible rates**[3]:

- *Flexibility*. Partnership allows the Facility Manager to change the amount of capacity nominated each month of the year and each hour of the day, whereas the interruptible rates require only one firm service level year round; this reduces the risk of not meeting one's capacity commitment;
- *Lower Penalties*. Partnership has a lower non-performance penalty -- $.10/kWh during the summer of 2002 (and $.70/kWh after that) compared to the $6.00-7.00 / kWh penalty in interruptible programs;
- *Support*. Partnership gives the Facility Manager the support of a Demand Reserve Provider and other customers as back-up in meeting demand reduction commitments to avoid penalties;
- *Energy Payment*. Partnership provides an energy (performance) payment (after 2002) in addition to a capacity (reservation) payment;
- *5-yr contract*. Partnership provides up to 5 year certainty on the existence of the incentive to help justify an investment;
- *Fits your operations*. Partnership provides the opportunity to specify a minimum or maximum demand reduction period that meets their operating conditions; for example, they can specify a maximum (e.g., 2 hours) which is less than the four hours of interruptible rates or request a minimum period longer (e.g., 8 hours) than four hours to minimize the number of days they can be called in a month or year.

Another possible load management incentive option is the **Demand Bidding Program**[4] (DBP). The DBP provides a lot of the flexibility, like the Partnership, in selecting the level of demand reduction. But the Partnership provides other significant advantages:

- *Savings Certainty*. Partnership provides greater certainty of savings – if California never has a stage 2 power alert, then the Facility Manager earns no savings under the DBP; in contrast, the Partnership provides reservation or capacity payments even if the facility is never asked to reduce; and
- *5-yr contract*. Partnership provides up to 5 year certainty on the existence of the incentive to help justify an investment.

[3] Facility Managers may find the utility Base Interruptible Program attractive if they: 1) have a constant load (e.g., billing demands each month of the year are within 5-10% of each other) and 2) have a lot of confidence in their ability to consistently reduce the required load every day of the year when called on to avoid the $6-7/kWh non-performance penalties.

[4] Facility Managers may find the utility Demand Bidding Program attractive if they: 1) have smaller facilities that cannot justify the incremental equipment costs of the Partnership or 2) want maximum flexibility, or 3) believe most years will have more than 100 hours of stage 2 power alerts -- leading to larger financial payments than under the Partnership. (One several-hour stage 2 alert has occurred since July 1, 2001.)

ATTACHMENT 2

STATE OF CALIFORNIA

CONSUMER POWER AND CONSERVATION FINANCING AUTHORITY

TO: Board of Directors
California Power Authority

FROM: Jeanne Clinton, Deputy Director Conservation and Distributed Generation

DATE: March 15, 2002

SUBJECT: PROGRESS REPORT ON REAL TIME METER PROPOSALS

Summary:

We received 11 proposals to this Request for Proposals (RFP). Staff plans to conduct negotiations with the bidders for the most promising four proposals, and will return to the Board in April or May to approve final contracts. This memo summarizes the process, the four leading contenders, and the next steps to finalize contracts. The four "short-listed" bidders are the consortia led by eMeter, GoodCents Solutions, SchlumbergerSema, and TruePricing.

Background:

In October the CPA issued a brief request for proposals (RFP) for financing the supply and installation of real time meters for California power customers. Target customers were those that did not already have such meters, i.e. those customers whose power demands were less than 200 kW. The RFP asked interested parties to submit proposals that addressed:

- Costs and expected benefits of installing such meters, including the
  - likely change in power consumption, both total and time of day, when customers switched to a time of day power tariff
  - potential to include with the meters an automatic function to reduce load during certain peak hours
- Details of a marketing program to deploy the meters
- Explanation of a mechanism to repay the loan.

Proposals Received:

Eleven bidders submitted proposals that presented an extremely wide-ranging set of target customer groups, meter and communications technologies, volume scales, technology and supporting program costs, business models for generating revenue to repay a CPA loan, and expected benefits – both to the power sector and to the customers. Table 1 lists all bidders and their partners.

Table 1

Real Time Meter RFP Bidders

Primary Bidder	Partners/Affiliates/Suppliers Named
ABB Electricity Metering	ABB, Inc.
ABTECH Corporation	Stellcom
eMeter	Siemens, ENEL
ENERJE, Inc.	MuNet, Inc.
GoodCents Solutions	Comverge Technologies, Honeywell, Inc.
Legacy Marketing LLC	Beijing Boer Energy-Saving Equipment Technology Development Co. Ltd., Seasun Electronic Corporation Ltd.
Olive Domestic Metering Ltd.	NA
SchlumbergerSema	CellNet, Schlumberger Limited
Seismotech	Smart Utilities Management System (SUMS)
Smart Safety Systems	James McGill, Patrick Power
TruePricing	Teldata Solutions, FirstPoint Energy Corporation, Schlumberger Vector, Applied Metering Technologies, IM Services

Review Criteria and Process:

This highly diverse set of options, and in many cases an equally wide degree of detail in the proposals, presented challenges for evaluation.

- In no case did a bidder's proposal submit evidence that any utility distribution companies (UDC) (whether investor- or publicly-owned) desires to collaborate in the deployment of these technologies.
- CPA staff consulted with the California Public Utilities Commission and confirmed that the CPUC would be agreeable to an approach using a voluntary enrollment of customers, using existing time-of-use tariffs (without development of a new "real-time" tariff).

Each proposal was evaluated against criteria that included the following:

- Costs of the proposed program approach (hardware, communications, marketing, billing or data services, and customer support),
- Functions to be performed, including flexibility to support any future real-time tariff or automated demand reduction program (that could be offered by the CA ISO, CPUC, CPA, and/or UDCs),
- Whether new tariffs or other regulatory action would be needed to carry out the bidder's approach,

- Expected power system benefits from reducing and/or shifting the timing of power use under a TOU tariff,
- Understanding of the target markets (residential and/or commercial customers, broadly, or with more specific characteristics),
- Business experience of the bidder (alone, or in any partnerships)
- Reasonableness of the projected revenue sources and financial security for eventual repayment of a CPA loan,
- Extent to which a turn-key marketing, installation, and customer support solution was presented for deploying the meters, and
- Any unique benefits or functions offered.

CPA staff reviewed the proposals, and also presented a high-level characterization of the proposals (in a "blind" format) to a group of California Energy Commission staff expert in advanced metering and demand response.

For the most promising proposals, CPA staff requested the bidders to respond to specific questions or clarifications regarding their proposals. Seven of the proposals are not suitable for CPA action for one or more of three reasons – the proposal was incomplete, the business plan or loan repayment plan was insufficient, and/or the technology presented was a prototype not yet commercially available.

Next Steps:

CPA staff will undertake detailed investigation and negotiation with the four most promising proposals, described in Table 2 below. The four are:

- eMeter
- GoodCents Solutions
- SchlumbergerSema
- TruePricing

The point of the upcoming negotiations is to resolve and document market, technical, financial, and utility collaboration details needed to enable the CPA to proceed to the bond market to secure loan funds.

Market: Not all proposals target the same customer groups. Two of the proposals envision deploying meters in both the general residential and non-residential populations. A third proposal would address only non-residential customers through a particular marketing method, while a fourth would address only high-use residential customers.

Technical: A range of technological approaches was presented for meter equipment, communication technologies (both one-way and two-way; phone line and wireless), and customer interface systems (internet-based data access, in-home display terminal, pre-programmed energy management systems, and utility customer communication programs).

Financial: It is essential for the Power Authority to be assured of the business case and associated revenue streams and risk/security features of the potential loans.

Utility Involvement: Three of the four leading proposals would require some form of utility involvement or collaboration; however, no such utility commitments were submitted. If UDC involvement is essential to the business plan, CPA needs confirmation of their involvement-- for example to participate in marketing and/or equipment installation, and/or commit revenues for meter reading and maintenance.

Schedule:

1. March 15- April: Staff requests that short-list bidders supply all necessary market, technical, or financial documentation needed for a CPA bond prospectus. This should include verification of any UDC's intent to collaborate with meter deployment.
2. April: Negotiate final contracts to finance all qualified loan projects.
3. April: Staff will brief CPUC and CEC staff on our intended course of action.
4. April and May: Staff will return to the Board for approval of each real time meter contract as it is ready.
5. June and onward: Arrange bond financing.

Table 1
Bidders Invited for Further Negotiations (*Details continue to be provided*)

Bidder	Partners	Customers Targeted	Scale Proposed	Estimated System Benefits	Potential Size of CPA All-in-cost Loan	Business Model Envisioned
eMeter	Siemens, ENEL	Non-residential initially; possible expansion to residential	10,000 minimum non-residential, potential addition of 1 million residential	10 MW initially, 1010 MW if fully expanded (at 1 kW/ customer) 3-5% energy savings	$10 million initially; additional $150 million if expanded to 1 million residential. No costs included for marketing & customer service, assuming utilities would pay for this.	Assumes power system pays for peak demand reduction; rest is unspecified. Utility personnel install, operate, and maintain meters & communications.
GoodCents Solutions	Comverge Technologies, Honeywell, Inc.	Residential customers with usage > 17,000 kWh/yr	10,000 in 5 years; ultimate goal 40,000 – 75,000	20 MW initial peak reduction (2 kW /home) 6% energy savings & 15% bill savings.	$10 million for initial 10,000 meters	Requires "near-RT" tariff, demand - response program payment, & customer willingness to pay for value-added services.
Schlumberger-Sema	CellNet, Schlumberger Limited	Both residential and non-residential customers (mix not specified)	100,000 – 2 million meters	"1% of peak load after 15 years" for service area affected	*Meter costs could range from $10-43 million for 100,000 meters (depending upon residential/ non-residential meter mix and network ownership) up to $150-650 million for 2 million meters. Both exclude installation, marketing, customer service, and other up-front costs.*	Assumes utility pays for hardware & data service. Assumes customer user fees as part of monthly per meter charge.
TruePricing	Teldata Solutions, FirstPoint Energy Corporation, Schlumberger, Applied Metering Technologies, IM Services	Non-residential customer under 200 kW in urban parts of IOU areas	10,000 meters first year, expanding to 50,000 over five years	100-200 MW peak reduction from 10,000 customers	$11.5 million for first 10,000 meters	Customer pays monthly fee to participate and pay off loans over 6 years; assumes meter & data feedback helps customer cut bills via TOU rates.

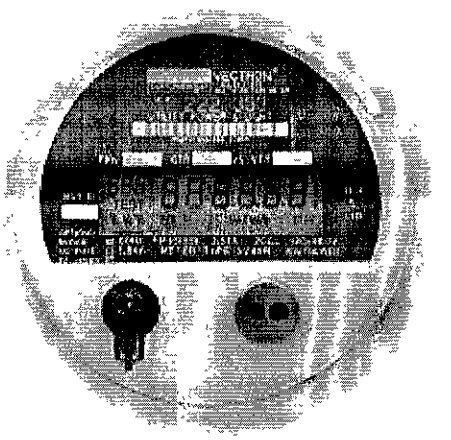
ATTACHMENT 3

TRUEENERGY, LLC
with arranged financing through the
CALIFORNIA CONSUMER POWER AND CONSERVATION FINANCING AUTHORITY
presents:

CalMeter™

Overview

CalMeter™ is a program empowering California small businesses to reduce their energy costs along with reducing system stress, through access to advanced metering and energy information technologies.



Current programs and incentives for advanced metering and other real-time information technologies are largely only available to commercial and industrial customers with peak demand of 200 kilowatts ("kWs") or greater.

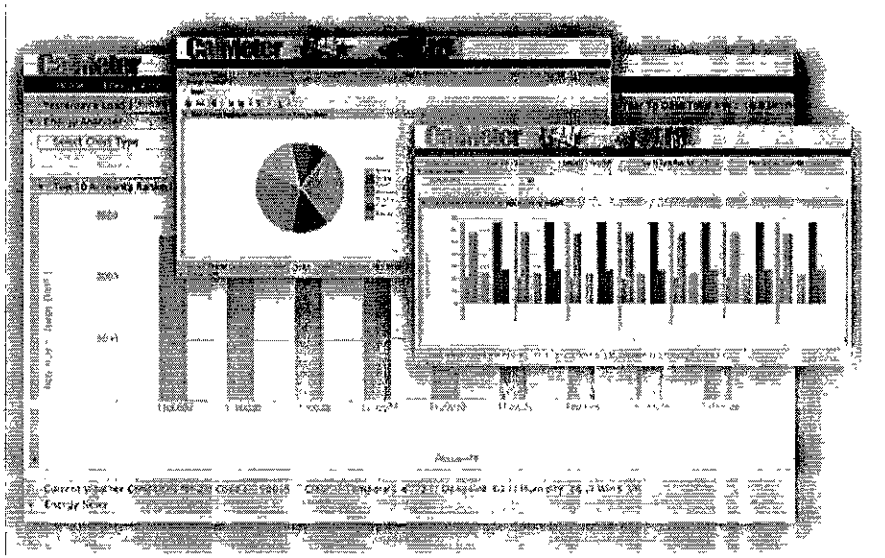
California businesses below the referenced threshold of 200 kWs of peak electricity demand are less fortunate. These small businesses have been unable to: (i) meaningfully participate in direct access; (ii) reasonably benefit from available rebate programs; (iii) afford the up-front capital costs required to implement advanced metering and information technologies; or (iv) qualify for advanced metering programs sponsored by investor-owned and municipal utilities. CalMeter™ is accordingly designed to widen the participation of California businesses in basic conservation measures through sponsoring the purchase and installation of interval meters and access to daily interval energy data.

CalMeter™ takes an affirmative next step. It assists businesses in acquiring the basic tools and information necessary to make informed operating decisions, thereby influencing conservation practices and significantly impacting system load and stress. As markets move toward real-time pricing, the State has the opportunity to more broadly empower consumers to place an economic value on various conservation practices and routinely decide which measures they wish to take.

Program Summary

CalMeter™ is an advanced metering program for California small businesses. Targeting California small businesses with peak electricity demand between 50 and 200 kW, CalMeter™ will finance and manage the installation of 10,000 interval meters. Additionally, CalMeter™ will provide program participants with the following: (i) access to time-of-use ("TOU") tariff schedules and rate schedule optimization generally, and (ii) web-enabled secured access to daily interval energy data through information tools provided over the internet.

CalMeter™ will manage the acquisition and installation of meters and meter communication lines, including, where appropriate, coordination with investor-owned utilities and municipal utilities.



CalMeter™ will also provide for the collection and storage of electronic data in an energy data warehouse. From this data warehouse, secure access to interval data will be provided for program participants through useful web-enabled tools and applications. CalMeter™ will set the stage for a more advanced electricity infrastructure within California and help pave the way for future load reacting and reducing programs.

With CalMeter™ meters in place, program participants will for the first time be able to access the cost benefits and load normalizing incentives offered in TOU tariffs. Moreover, through the CalMeter™ website, program participants will further benefit by being able to actively view and understand their energy usage on a daily profiled and aggregated basis, thus allowing them to better manage their energy consumption and use patterns and costs and make informed decisions about conservation measures. With such inducements, the CalMeter™ program will reduce system peak loads as well as reduce energy costs for program participants.

Profile of Program Statistics

Target Customers: Businesses < 200 kW demand.

Status: Program designed. Financial closing expected Q3 2002, with meter installation to commence Q4 2002.

Cost: Customer pays for meter and communication infrastructure (with option for loan financing) and enrolls in energy information service for monthly fee.

Infrastructure Financing: Calif. Power Authority arranged financing for small business customer infrastructure, estimated to cost $30-40/month.

Participating Parties: TrueEnergy, LLC, a wholly owned subsidiary of TruePricing, Inc., is the CalMeter program manager, calling upon other business partners to supply meters, MSP, and MDMA services.

Expected Benefits: 100 MW approximate peak reduction, plus energy efficiency, from 10,000 meter initial target.

CERTIFICATE OF SERVICE

I certify that I have by electronic mail this day served a true copy of the original attached "California Consumer Power and Conservation Financing Authority's Description of Existing and Planned Demand-Response Activities" on all parties of record in this proceeding or their attorneys of record.

Dated August 9, 2002, at Sacramento, California.

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